Name **Graphing Quadratic Equations**

**Vertex Form y = a(x - h)2 + k**

Opening up \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Opening down **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Determine if the graph opens up or down.

**1.**  **2.**  **3.** 

**Axis of Symmetry and x-coordinate of the vertex**

X = opposite of h

Find the axis of symmetry of the parabola.

**4.**  **5.**  **6.**  

Find the vertex of the parabola (*h,k*).

7.  8.  9. 

Graph the following quadratic equations. Find the axis of symmetry and the vertex.

**10.**  **11.**   **12.**  



**Vertex Form**

**Practice Problems:** pg 253 #26-28

26) 27) 28)



Name **Graphing Quadratic Equations**

**Intercept Form y = a(x – p)(x – q) 🡪p and q are the x-intercepts**

Opening up \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Opening down **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Determine if the graph opens up or down.

**1.**  **2.**  **3.** 

**Axis of Symmetry and x-coordinate of the vertex**

x is halfway between p and q (the average of the two)

Find the axis of symmetry of the parabola.

**4.**  **5.**  **6.**  

Find the vertex of the parabola.

7.  8.  9. 

Graph the following quadratic equations. Find the axis of symmetry and the vertex.

**10.**  **11.**   **12.**  



**Intercept Form**

**Practice Problems:** pg 254 #32 – 34

32) 33) 34)



**Mixed Practice**

SHOW HOW YOU FOUND THE VERTEX!

1) y = -2(x + 5)2 – 2 2) y = 3(x – 4)(x + 5) 3) y = -x2 – 6x +3



4) y = 4x2 – 8x – 4 5) y = (x – 3)2 + 4 6) y = -2(x + 3)(x – 6)



**Homework**

In book, pg 253:

SHOW HOW YOU FOUND THE VERTEX!

29) 30) 31)



35) 36) 37)

